





WHAT IS STRESS?

Stress can be defined as a biological or psychological response to new or threatening circumstances.

Stressors include extreme weather, travel, exercise, exposure to disease and even simple diet changes – all of which can impact your horse. Stress can be acute (short term) or chronic (long term). Acute stress can be beneficial as in the effect of exercise; however, chronic stress or the combination of stressors can have undesirable impacts on your horse.

STRESS AND CORTISOL CONNECTION

Under stress, your horse's adrenal gland releases cortisol — a stress hormone. Cortisol re-directs nutrients to be used as part of the fight or flight response. In short term situations (e.g. exercise), this can be beneficial. However, when exposed to chronic, repeated or layered stressors, elevated cortisol levels have a detrimental impact on your horse. The resulting redirection of energy can inhibit the immune system and reduce physical performance.

CHROMIUM AND CORTISOL

Stress and cortisol have a tremendous impact on the health and performance of the horse. Feeding chromium has been shown to reduce cortisol levels in horses, swine and poultry ^{2,3,4} resulting in improved body upkeep, health, performance and overall wellbeing.

EFFECTS OF CHRONIC STRESS AND INCREASED CORTISOL LEVELS 1

- × Aggressive behavior
- X Decreased growth
- X Impaired reproductive capacity
- X Inhibition of the immune system
- X Increased risk of gastric ulcers, colic and diarrhea
- X Reduced performance

Chromium may reduce the negative impacts of stress and optimize energy use.

KemTRACE[®] Chromium 25% REDUCTION IN PLASMA CORTISOL WHEN FEEDING CHROMIUM[®]

DIET

- Hay variability
- · Feed and water quality
- · Toxins from molds
- · Feed and water restrictions





ENVIRONMENTAL

- Pests
- · Hot, humid weather
- Socialization changes
- Changes to habitat

Metabolic syndrome

HEALTH

- · Pathogens (e.g. Clostridium, Salmonella or Escherichia coli)
- Parasites
- Diseases

EQUINE STRESSORS



PERFORMANCE

- Training
- Injuries or joint issues
- · Show schedules

SITUATIONAL

- Travel/trailering
- Vet and farrier visits
- Schedule changes







MEDICATIONS

- Pain/NSAIDS (e.g. Banamine® or Equioxx®)
- Antibiotics
- Deworming treatments
- Vaccinations

MILESTONES

- Reproduction
- Weaning
- Lactation
- Breeding



Learn more about how KemTRACE Chromium can help your horse at kemin.com/chromiumeq.

1-800-752-2864

REFERENCES

- 1. Malinowski, K. (n.d.). Stress Management for Equine Athletes. Retrieved April 16, 2020, from https://esc.rutgers.edu/fact_sheet/stress-management-for-equine-athletes/
- 2. Hung, A.T., Leury, B.J., Sabin, M.A. et al. Dietary nano-chromium tripicolinate increases feed intake and decreases plasma cortisol in finisher gilts during summer. Trop Anim Health Prod 46, 1483–1489 (2014). https://doi.org/10.1007/s11250-014-0673-7 3. Kentucky Equine Research. (2018, March 7). The Effect Of Chromium Supplementation On Metabolic Response To Exercise In Thoroughbred Horses. Retrieved April 16, 2020, from
- https://ker.com/published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-effect-of-chromium-supplementation-on-metabolic-response-to-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbred-horses/linear-published/the-exercise-in-thoroughbr
- 4. Toghyani et al. 2006. International Journal of Poultry Science 5 (1):65-69.